Intronics Power Inc.
1400 PROVINDENCE HIGHWAY • BUILDING 2 SUITE 2400
NORWOOD, MASSACHUSETTS 02062-5015 USA
www.intronicspower.com

U10 SERIES DC/DC MODULES

Applications

- Servers, Switches and Data Storage
- Wireless Communications
- Distributed Power Architecture
- Semiconductor Test Equipment
- Networking Gear
- Data Communications
- Telecommunications
- Industrial / Medical

The U10 Families of high efficiency DC/DC converters offer power levels of up to 10 Watt, which exceeds that of other bricks with the same Industry-Standard Pinouts, while providing much smaller footprints. With a ultra- wide input voltage range and single and multi-outputs, ranging from 3.3 to ±15 Volts, these converters provide versatility without sacrificing the board space. All models feature an input filter, input undervoltage lockout, output current limiting and short circuit protection. The fully enclosed, encapsulated construction achieves very efficient heat transfer with no hot spots. All converters combine creative design practices with highly derated power devices to achieve very high reliability, high performance and low cost solution to systems designers.

Model Num	V_{In}	V_{Out}	I_{Out}	$I_{No\ Load}$	$I_{Full\ Load}$	Eff	Case
U10-12S5	9-36 VDC	5.0 VDC	2000.0 mA	15.0 mA	534.0 mA	78%	U
U10-12S12	9-36 VDC	12.0 VDC	830.0 mA	15.0 mA	520.0 mA	80%	U
U10-12S15	9-36 VDC	15.0 VDC	666.0 mA	15.0 mA	520.0 mA	80%	U
U10-12D12	9-36 VDC	±12.0 VDC	±415.0 mA	20.0 mA	520.0 mA	80%	U
U10-12D15	9-36 VDC	±15.0 VDC	±333.0 mA	20.0 mA	520.0 mA	80%	U
U10-12D5	9-36 VDC	±5.0 VDC	±1000.0 mA	20.0 mA	520.0 mA	80%	U
U10-12S3.3	9-36 VDC	3.3 VDC	2000.0 mA	15.0 mA	362.0 mA	76%	U
U10-48S5	18-72 VDC	5.0 VDC	2000.0 mA	10.0 mA	260.0 mA	80%	U
U10-48S12	18-72 VDC	12.0 VDC	830.0 mA	10.0 mA	257.0 mA	81%	U
U10-48S15	18-72 VDC	15.0 VDC	666.0 mA	10.0 mA	257.0 mA	81%	U
U10-48D12	18-72 VDC	±12.0 VDC	±415.0 mA	15.0 mA	257.0 mA	81%	U
U10-48D15	18-72 VDC	±15.0 VDC	±333.0 mA	15.0 mA	253.0 mA	82%	U
U10-48D5	18-72 VDC	±5.0 VDC	±1000.0 mA	15.0 mA	253.0 mA	82%	U
U10-48S3.3	18-72 VDC	3.3 VDC	2000.0 mA	10.0 mA	181.0 mA	76%	U



Approval Pending

Typical at Ta= +25 ºC under nominal line voltage and 75% load conditions, unless noted. The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.

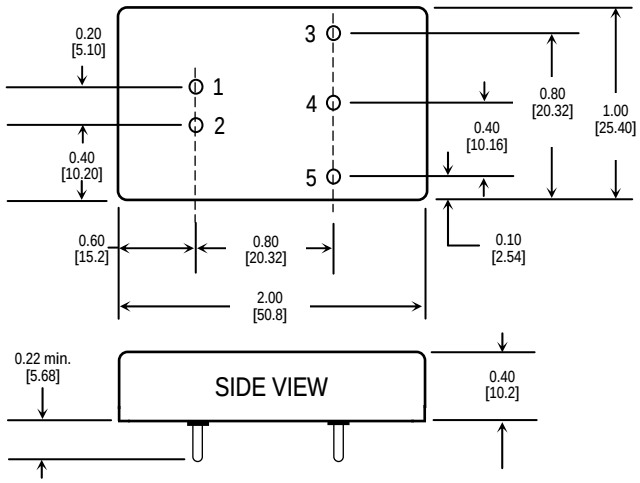
Consult factory for hundreds of other available input/output voltage configurations.

Input Specifications	
Input Voltage Range	12V---------9-36V 48V--------18-72V
Input Filter	Pi Type
Output Specifications	
Voltage Accuracy Single Output	+/-1.0% max.
Voltage Accuracy Dual+Output	+/-1.0% max.
Voltage Accuracy Dual-Output	+/-1.0% max.
Voltage Balance Dual Ouptut at Full Load	+/-1.0% max.
Transient Response	
Single 25% Step Load Change	<500u sec.
Dual FL. 1/2 +/- 1% Error Band	<500u sec.
Ripple and Noise. 20MHz BW	75mV p-p max.
Terperature Coefficient	+/-0.02% /ºC max.
Short Circuit Protection	Continuous
Line Regulation[1] Single Dual/Output	+/-0.2% max.
Load Regulation[2] Single Dual/Output	+/-1.0% max
General Specifications	
Efficiency	See Table
Isolation Voltage	500VDC
Isolation Resistance	10^9 ohms
Switching Frequency	200KHz min.
Operating Temperature Range	-25ºC to +71ºC
Case Temperature	100ºC max.
Cooling	Free-Air Convection
Storage Temperature Range	-40ºC to +100ºC
EMI / RFI	Six sided Continuous Shield
Dimensions	2X1X0.4 Inches
Case Material	Black Coated Copper with Non-Conductive Base
Notes	
1.	Measured From High Line to Low Line
2.	Measured From Full Load to 1/4 Load

Specifications & Features Summary

- 500V, 10MΩ input-to-output isolation
- No airflow or heatsink required
- Enclosed six-sided metal shield construction for low EMI/RFI
- Efficiency up to 82%
- 4:1 Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Meets EN55022 Class A, Conducted
- Delivers up to 10W in 2"x1" package with Industry-Standard Pinouts

BOTTOM VIEW
U10 FAMILY



Pin #	U10 S(ingle)	U10 D(ual)
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Common
5	Vout -	Vout -

Tolerances
Inches
• XX ±0.040
• XXX ±0.010

All dimensions are in inches [mm]
All pins are dia. 0.040 [1.02]
Pin material: Gold plated Brass